

### **Remarks**

Based on these remarks and amendments, Applicants respectfully submit that this Application is in condition for allowance. However, if the Examiner considers the application to not be in condition for allowance, Applicants respectfully request that an Advisory Action be issued as this reply is being filed within two months of the mailing date of the Office Action.

### ***Withdrawal of the finality of the rejection***

Applicants believe that the Office Action presents new grounds of rejection that are not necessitated by any amendments made by Applicants in response to the previous Office Action. (*See* MPEP 706.07(a)). For example, amendments to claim 1 in the Applicants' response to the previous Office Action were to improve readability. In the present Office Action, the Examiner has withdrawn the assertion that the claimed invention was anticipated by Riley. The Examiner now maintains that the claimed invention is obvious over Riley and Stokdijk. Stokdijk was not cited in the previous Office Action and Applicants have not, therefore, been able to address the Examiner's rejection. Therefore, Applicants believe, the final rejection is improper. Applicants respectfully request that the finality of the instant Office Action be withdrawn.

### ***Status of Claims***

Claims 1-3, 5-12, and 14-18 are pending in the application, with claims 1 and 10 being the independent claims. The rejection of claims 1-3, 5-12, and 14-18 are traversed below. Applicants have amended claims 1 and 10 to more clearly define the invention. Claim 15 has been amended to improve readability. Claims 4 and 13 have been

cancelled herewith without prejudice to or disclaimer of the subject matter therein. The amended claims are supported by the original claims and throughout the specification. Applicants believe that no new matter has been introduced.

Based on the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding rejections and that they be withdrawn.

***Rejections under 35 U.S.C. § 103***

**Claims 1-8, and 10-17**

Claims 1-8, and 10-17 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Riley et al., U.S. Patent 6,507,391 ("Riley") in view of Stokdijk (5,675,517). Applicants respectfully traverse the rejections of claims 1-3, 5-8, and 10-12, and 14-17.

Riley and Stokdijk, alone or in combination, do not teach or suggest each and every feature of claim 1 as amended. For example, Riley and Stokdijk, alone or in combination, do not teach or suggest removing a DC offset from the signal with a base line restoration circuit to obtain a base line restored signal, wherein the DC offset is locked during pulses of the electronic signal, as recited in claim 1.

Riley contains no reference to, or suggestion of, having a base line restoration circuit with a DC offset locked during pulses as required by claim 1. With reference to claims 4 and 13, the Office Action alleges that Riley teaches a method, wherein the DC offset is locked during pulses of the electronic signal. (*See* the Office Action at p. 3). Applicants disagree. In column 22 lines 61-67, i.e., the text referred to by the Office Action, Riley refers only to an ADC (analog-digital converter), not a base line restoration

circuit. There is no teaching or suggestion in Riley of a DC offset that is locked during pulses. Neither does Stokdijk teach or suggest having a DC offset locked during pulses of an electronic signal as recited in claim 1. For example, Applicants respectfully submit that the base line restoration circuit in Stokdijk (e.g., 5:49-51) does not have the functionality recited in claim 1.

Although both Riley and Stokdijk appear to reduce the DC component of an input signal, they do so by the use methods that are different from the present invention. For example, Riley appears to teach the use of a baseband filter to reject a DC component of a signal (*See*, e.g., Riley 16:12-20). As noted in the Applicants' response to the previous Office Action, the use of a baseband filter (e.g., as used in Riley) is an alternative to a base line restoration circuit (e.g., as recited in claim 1) to remove DC offset. Stokdijk appears to teach a feedback base line restoration circuit (e.g., 5:49-51) and the use of a separate offset compensation circuit (*See* e.g., 5:55-57) to remove a DC offset. The feedback base line restoration circuit described in Stokdijk estimates the DC component to be reduced from the signal and then adjusts the signal based on the estimated DC component. As pointed out in Stokdijk, this would typically not adequately adjust the signal when operating at high event rates. (*See* 7:25-39). Therefore, to further reduce the DC component, Stokdijk requires a separate offset compensation circuit that causes the base line restoration circuit to alter the estimate of the DC component by a predetermined amount. (*See* 7:41-44).

In contrast to Riley and Stokdijk, the present invention teaches an enhanced base line restorer with locking. The enhanced base line restorer with locking can, for example, fix the offset to be used in removing the DC component during acquisition of the signal so that errors in base line restoration due to effects of high event rate are avoided. (*See* paragraphs [0033]-[0034]). Dynamically acquiring the offset to be used during signal acquisition, as in the present invention, is more adaptable to different types of signals and can be generally more accurate than the method described in Stokdijk.

For at least the foregoing reasons, claim 1 is patentable over Riley in view of Stokdijk. Independent claim 10 recites a system corresponding to the method recited in independent claim 1. Accordingly, independent claim 10 is patentable over Riley in view of Stokdijk for at least the same reasons as independent claim 1. Dependent claims 2-3, 5-8, 11-12, and 14-17 are likewise patentable over Riley in view of Stokdijk for at least the same reasons as the independent claims from which they depend, and further in view of their own respective features. Accordingly, Applicants respectfully request that the rejection of claims 1-3, 5-8, 10-12 and 14-17 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

**Claims 9 and 18**

Claims 9 and 18 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Riley and Stokdijk in view of U.S. Patent No. 5,598,158 to Linz *et. al.* ("Linz"). Applicants respectfully traverse.

Linz does not supply the teachings missing from Riley and Stokdijk described above. For example, Linz does not teach "removing a DC offset from the signal with a

base line restoration circuit to obtain a base line restored signal wherein the DC offset is locked during pulses." Claim 9 is dependent from independent claim 1, and claim 18 is dependent from independent claim 10. Therefore, claims 9 and 18 are patentable over Riley and Stokdijk in view of Linz for at least the same reasons set forth above as the independent claims from which they depend, and further in view of their own respective features. Accordingly, Applicants respectfully request that the rejection of claims 9 and 18 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

### ***Conclusion***

All of the stated grounds of objection and rejection have been properly traversed. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Reply to Office Action of September 29, 2008

Jochum *et al.*  
Appl. No. 10/587,887

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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